

Amendment and Response

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Serial No.: 09/577,551

Confirmation No.: 5353

Filed: 24 May 2000

For: ABRASION-RESISTANT INK COMPOSITIONS AND METHODS OF USE

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. – 10. (Cancelled)

11. (Currently Amended) A method for improving durability of an image on an elastomeric bandage comprising the step of:

coating an imagewise layer of a urethane polymer-containing ink composition onto an elastomeric substrate, which forms a part of the elastomeric bandage, wherein the urethane polymer comprises a number average molecular weight in the noncross-linked form of about 1,500 to about 50,000; and further wherein the composition comprises urethane polymer particles leaving a particle size of 0.01 micron to 0.25 micron.

12. (Previously Presented) The method of Claim 11 wherein the urethane polymer-containing ink composition is a water-based composition comprising a dispersion of pigment.
13. (Original) The method of Claim 11 wherein the urethane polymer-containing compound further comprises a cross-linker to cross-link the urethane polymer.

14. – 15. (Cancelled)

16. (Currently Amended) A method for printing an image on an elastomeric bandage comprising the step of:

printing an image onto an elastomeric substrate, which forms a part of the elastomeric bandage, using at least one ink composition comprising a stable nonpolyethylene containing aqueous dispersion of pigment and particles of a urethane

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polymer; wherein the particles of the urethane polymer have a particle size of 0.01 micron to 0.25 micron.

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17. (Previously Presented) The method of Claim 16 further comprising the step of coating a layer of a urethane polymer-containing composition onto the elastomeric substrate before the printing step.
  18. (Original) The method of Claim 16 wherein the urethane polymer comprises a number average molecular weight in the noncross-linked form of about 1,500 to about 50,000.
  19. (Original) The method of Claim 17 wherein the urethane polymer-containing compound of the coating step further comprises a cross-linker to cross-link the urethane polymer.
  20. (Original) The method of Claim 16 wherein the ink composition further comprises a cross-linker to cross-link the urethane polymer.
  21. (Original) The method of Claim 16 wherein the ink composition is provided in at least one layer of ink in the printed image.
  22. (Previously Presented) The method of Claim 16 wherein at least one ink composition comprises a dispersion of white pigment.
  23. (Original) The method of Claim 16 wherein the at least one ink composition comprises at least one layer of ink in the image.
  24. (Original) The method of Claim 16 wherein the at least one ink composition is in the last ink layer printed in the image.

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25. (Currently Amended) A method for printing an image on an elastomeric bandage comprising ~~the steps of:~~
- printing a first layer of ink onto an elastomeric substrate, which forms a part of the elastomeric bandage, the first layer of ink comprising a stable aqueous dispersion of pigment and particles of a urethane polymer; and
- printing an image over the first layer of ink wherein the last layer of ink, farthest from the substrate, comprises a stable aqueous dispersion of pigment and particles of a urethane polymer, wherein the particles of the urethane polymer have a particle size of 0.01 micron to 0.25 micron.
26. (Original) The method of Claim 25 wherein at least one layer of ink is printed using a nonaqueous-based ink.
27. (Original) The method of Claim 25 wherein the ink composition in the first layer of ink further comprises a cross-linker to cross-link the urethane polymer.
28. (Original) The method of Claim 25 wherein the first layer comprises an ink comprising a white pigment.
29. (Original) The method of Claim 25 wherein an opaque layer of white pigment is disposed between the first layer of ink and the image.
30. (Original) The method of Claim 25 wherein the image is printed with an ink composition comprising a stable aqueous dispersion of pigment and particles of a urethane polymer.
31. (Original) The method of Claim 25 wherein the last layer of ink, farthest from the substrate, further comprises a cross-linker to cross-link the urethane polymer.

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32. (Original) The method of Claim 25 wherein the image is covered with a coating comprising a backsize or sealer.
33. (Original) The method of Claim 25 wherein the sealer is a urethane polymer adhesive.
34. (Cancelled)
35. (Previously Presented) The method of Claim 16 wherein the bandage comprises the elastomeric substrate and an adsorbent pad.
36. (Original) The method of Claim 35 wherein the image is printed over the adsorbent pad.
37. (Previously Presented) The method of Claim 16 wherein the elastomeric substrate is selected from a group consisting of polyurethane, elastomeric polyethylene, low density polyethylene and a nonwoven elastomeric web.
38. (Cancelled)
39. (Currently Amended) A method for limiting abrasion of an ink on an elastomeric bandage comprising ~~the steps of:~~  
applying at least one ink composition comprising a water-based dispersion of a urethane polymer to an elastomeric substrate, which forms a part of the elastomeric bandage, in an imagewise fashion; wherein the dispersion of a urethane polymer comprises urethane polymer particles having a particle size of 0.01 micron to 0.25 micron.

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40. (Original) The method of Claim 39 wherein the composition is an ink composition comprising a stable aqueous dispersion of pigment and particles of a urethane polymer and a cross-linker to cross-link the urethane polymer.
41. (Original) The method of Claim 39 wherein the at least one ink composition of the printing step comprises a stable aqueous dispersion of pigment and particles of a urethane polymer and a cross-linker to cross-link the urethane polymer.
42. (Original) The method of Claim 39 wherein the printing step is selected from the group consisting of rotogravure printing, flexographic printing and offset printing.
43. (Previously Presented) The method of Claim 39 wherein the elastomeric substrate is selected from a group consisting of polyurethane, elastomeric polyethylene, low density polyethylene, and a nonwoven elastomeric web.
44. (Original) The method of Claim 39 wherein the composition comprises a water-based pigment.
45. (Original) The method of Claim 39 wherein the water-based pigment is a white pigment.
46. – 48. (Cancelled)
49. (Currently Amended) An elastomeric bandage comprising a printed image wherein the printed image is prepared from at least one ink composition comprising a stable aqueous dispersion of pigment and particles of a urethane polymer; wherein the particles of a urethane polymer have a particle size of 0.01 micron to 0.25 micron.

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50. (Original) The elastomeric bandage of Claim 49 wherein the at least one ink composition further comprises a cross-linker to cross-link the urethane polymer.
51. (Original) The elastomeric bandage of Claim 49 wherein the bandage further comprises a pad.
52. (Original) The elastomeric bandage of Claim 51 wherein the image is printed over the pad.
53. (New) The method of claim 11 wherein the polymer particles have a particle size of 0.01 micron to 0.10 micron.
54. (New) The method of claim 16 wherein the polymer particles have a particle size of 0.01 micron to 0.10 micron.
55. (New) The method of claim 25 wherein the polymer particles have a particle size of 0.01 micron to 0.10 micron.
56. (New) The method of claim 39 wherein the polymer particles have a particle size of 0.01 micron to 0.10 micron.
57. (New) The bandage of claim 49 wherein the polymer particles have a particle size of 0.01 micron to 0.10 micron.
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